

Synthesis scale vs Guaranteed yield

The **synthesis scale** refers to the **amount of raw material** used to start the synthesis of oligonucleotides.

The **yield** corresponds to the amount of **final product**

recovered at the end of the synthesis and purification processes.

The length, the sequence, the type/number of modifications and the purification, strongly

influence the reaction yield.

Based on that, Eurogentec defined a minimum guaranteed yield in nmoles for all product categories (see table below).

The minimum guaranteed yields represent only a reference because the delivered quantities may vary.

		Synthesis scale (nmol)																Minimum Guaranteed Yield (nmol)																	
		10		40		200		1000		2500		5000		10000		20000																			
Range	Product	Length	SePOP RP- Cartridge+Gold™ HPLC (RP or IEX)	SePOP RP- Cartridge+Gold™ HPLC (RP or IEX) ⁶	PAGE ³ Dual HPLC ⁶	SePOP RP- Cartridge+Gold™ HPLC (RP or IEX), <i>in vivo</i> ⁶	PAGE ³ Dual HPLC ⁶	SePOP RP- Cartridge+Gold™ HPLC (RP or IEX), <i>in vivo</i> ⁶	PAGE ³ Dual HPLC ⁶	SePOP HPLC (RP or IEX) ⁶	Dual HPLC ⁶ PAGE ³	SePOP HPLC (RP or IEX) ⁶	Dual HPLC ⁶ PAGE ³	SePOP HPLC (RP or IEX) ⁶	Dual HPLC ⁶ PAGE ³	SePOP HPLC (RP or IEX) ⁶	Dual HPLC ⁶ PAGE ³																		
Custom Oligonucleotides	Non-Modified (DNA only)	5-9	-	-	-	60	50	30	20	15	180	100	80	40	40	450	200	100	100	900	400	200	200	1800	800	400	400	-	-	-					
		10-19	5	4	-	20	16	10	4	3	70	60	45	30	23	200	140	100	70	50	500	250	125	125	1000	500	250	250	2000	1000	500	500	4200	2100	1050
		20-39	5	4	-	20	16	10	4	2	60	50	30	20	15	190	120	90	40	45	475	225	115	115	1000	500	250	250	2000	1000	500	500	4200	2100	1050
		40-59	3	2	-	10	8	5	2	1	30	25	15	12	7	115	60	45	20	20	285	110	55	55	600	230	115	115	1200	460	230	230	2500	1000	500
		60-79	2	2	-	8	6	-	2	-	20	18	-	8	-	75	40	-	14	-	185	-	-	40	350	-	-	90	750	-	-	180	1500	-	-
		80-99	-	-	-	-	-	-	1	-	-	-	-	3	-	-	-	-	-	5	-	-	-	30	-	-	-	40	-	-	-	80	-	-	
	100-139	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	10	-	-	-	20	-	-	-	40	-	-		
	Modified ⁽¹⁾ (including DNA, RNA, 2'-O-Me RNA, LNA [®] and phosphorothioate linkages)	5-9	-	-	-	-	3	-	-	-	12	-	6	-	-	25	-	12	-	60	30	30	-	125	60	60	-	250	125	125	-	-	-		
		10-19	-	-	-	12	6	5	4	1	35	20	17	15	8	70	40	35	30	15	175	90	45	45	500	190	95	95	1000	380	190	190	2000	760	380
		20-59	-	-	-	8	5	4	3	1	20	15	12	10	6	45	35	25	20	12	100	65	30	30	300	135	65	65	600	275	130	130	1200	600	275
		60-139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	30	-	-	-	60	-	-		
	Real-Time qPCR Probes	Double-Dye probes ⁽²⁾	8-45	-	-	<2 ⁽⁴⁾	-	4	-	-	12	-	-	-	-	25	-	-	-	65	-	-	-	135	-	-	-	275	-	-	-	600	-	-	
Molecular Beacons		28-50	-	-	1	-	-	-	4	-	-	-	-	-	12	-	-	-	30	-	-	-	65	-	-	-	130	-	-	-	275	-	-		
	MGB Taqman Probes	8-30	Delivered quantity : 6, 20 or 50 nmol																																
			Delivered Quantity (nmol)																																
RNAi Oligonucleotides	siRNA Duplexes Non-Modified and ⁽³⁾ Modified ⁽¹⁾	21-27	7	-	3	22	-	12	-	-	60	-	40	-	200	-	80 ⁷	-	-	On Request															
NGS Oligonucleotides	RP-Cartridge purified RP-HPLC purified	20-85	Minimum delivered quantity : 10 nmol																																
Universal Primers	-	15-38	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Unique Oligonucleotides	-	2-225	On request - please contact us at unique@eurogentec.com																																

Post-synthesis modifications may yield 50% less than the above stated values.

Notes

[1] Between 5 and 59 bases length single-modified oligonucleotides. Eurogentec does not provide minimum guaranteed yield for modified oligonucleotides longer than 59 bases. Post-synthesis modifications are not compatible with SePOP and RP-Cartridge+Gold™ purification. A lower yield may result from poly-modifications and/or strong secondary structures.

[2] Double-Dye probes only result from the combination of a 5' fluorescent dye and a 3' quencher.

[3] Except for oligonucleotides with GC-rich regions.

[4] Only available for Double-Dye FAM-TAMRA 10 nmol and FAM-BHQ1® 10 nmol.

[5] Non-modified siRNAs only include 3' dTdT overhang.

[6] Please be aware that all purifications containing an IEX-HPLC are limited to a length up to 39 bases.

[7] 80 nmol cannot be delivered with *in vivo* purification.

List of the post-synthesis modifications

- > 5' Alexa Fluor® (350, 430, 488, 500, 514, 532, 546, 555, 568, 594, 610, 633, 647, 660, 680, 700 and 750)
- > 5' ATTO (390, 425, 465, 488, 495, 520, 532, 550, 565, 590, 594, 610, 620, 633, 635, 647N, 655, 680, 700, 725 and 740)
- > 5' BODIPY® (530/550, FL and TR)
- > 3', 5' and dT Cascade Blue®
- > 3' and dT Cy® (3, 3.5, 5 and 5.5)
- > 3', 5', dR and dT Digoxigenin
- > 5' Dragonfly Orange®
- > 5' DY-(681, 781 and 782)
- > dR 6-FAM
- > dR and dT HEX
- > 5' HiLyte™ Fluor (405, 488, 555, 594, 647, 680 and 750)
- > 3', dR and dT JOE
- > 5' Marina Blue®
- > 5' Oregon Green® (488 and 488 X)
- > 5' Pacific Blue™
- > 3' QXL®
- > 3', 5', dR and dT Rhodamine 6G
- > 3', 5', dR and dT ROX
- > 5' TAMRA
- > dR and dT TET
- > 3', 5', dR and dT Texas Red®

